

a1
amended.
the plant and derived by summing the outputs of the PID Controller, the Feed Forward Controller and the Adaptive Feed Forward Controller; and

[Please rewrite the paragraph beginning on page 5, line 15, as follows:]

Figures 4(a)-(c) are graphs of control system signals, showing the tracking ability of a system without the adaptive feed forward component of the present invention in which Figure 4(a) represents a signal representing a desired trajectory x_d , Figure 4(b) represents the error signal $(x_d - x)$, and Figure 4(c) represents the control signal U provided at the input of the plant and derived by summing the outputs of the PID Controller, the Feed Forward.

Please rewrite the paragraph beginning on page 9, line 18, as follows:

a2
The experimental results are shown in Figures 3(a)-(c), showing a maximum tracking error of around 5 Tm . To further illustrate the effectiveness of the adaptive dither, the control results without the dither signal are shown in Figures 4(a)-(c).

IN THE CLAIMS:

Please rewrite claims 1, 2, 3, and 8 as follows:

a3
cont.
1. (Amended) A control system for controlling a plant having an operating characteristic which describes the translation of a plant input to a plant output, wherein the plant operating characteristic has a linear component and a non-linear component, the control system comprising:

a feedback control function; and